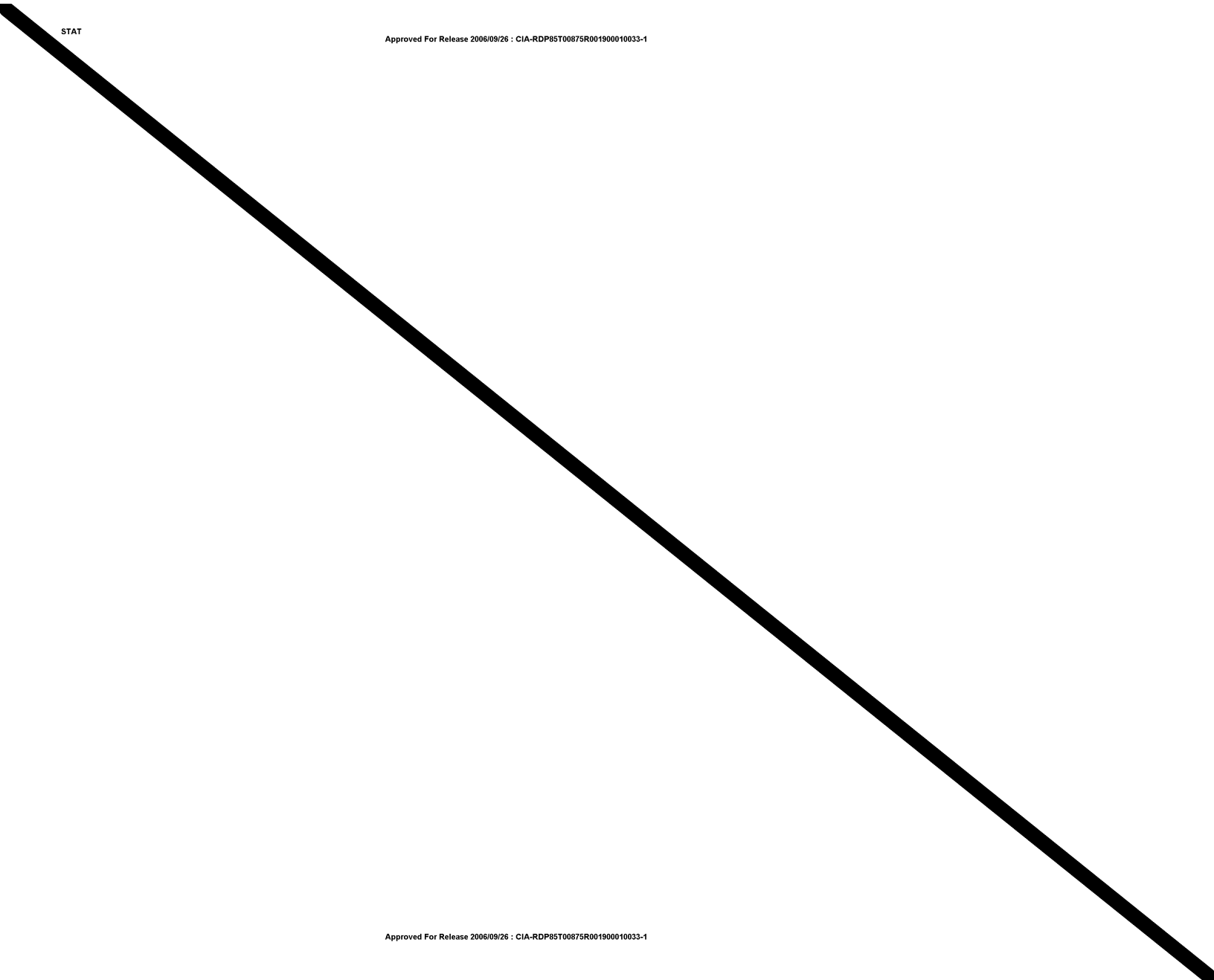


30 November 1973

MEMORANDUM FOR:

ATTENTION :

SUBJECT : Antarctic Mineral Resources

Attached is the material in support as per our conversation of 16 November. If we can be of further assistance, please contact

Chief,
Latin America Branch, OER

Attachment:
As stated

Distribution: (S-5695)
Orig. & 1 - Addressee
1 - D/OER
1 - D/D
1 - SA/ER
1 - St/P
2 - D/LA

OER/D/LA (30 Nov 73)

Antarctic Mineral Resources

There presently are no mineral deposits that can be economically extracted in Antarctica. The few deposits of minerals that have been found are described as occurences rather than deposits since insufficient information is available to determine the magnitudes and profiles of minerals.

Known mineral occurances are confined to limited exposures of rock in the Transantarctic Mountains and those that border the continent. Many are isolated blocks brought to the coast in ice streams and their bedrock sources are only inferred. Occurances of non-metallic resources include small quantities of sand and gravel, mica, beryl, quartz crystals, graphite, phosphate rock, and marble. Among the metallic minerals, magnetite has been reported at numerous locations in East Antarctica and in the Dufek intrusion of the Transantarctic and Pensacola Mountains; siliceous iron formations in East Antarctica and as drift along the Wilhelm II coast; copper in the Antarctic Peninsula and in the Dufek intrusion; gold and silver in the Antarctic Peninsula; and molybdenite in the Precambrian rocks of East Antarctica.

Fossil fuels have been indentified in the coal deposits of low quality exposed in the Transantarctic Mountains and on the east side of the ice sheet in East Antarctica. Coal may be hidden throughout much of East Antarctica. The

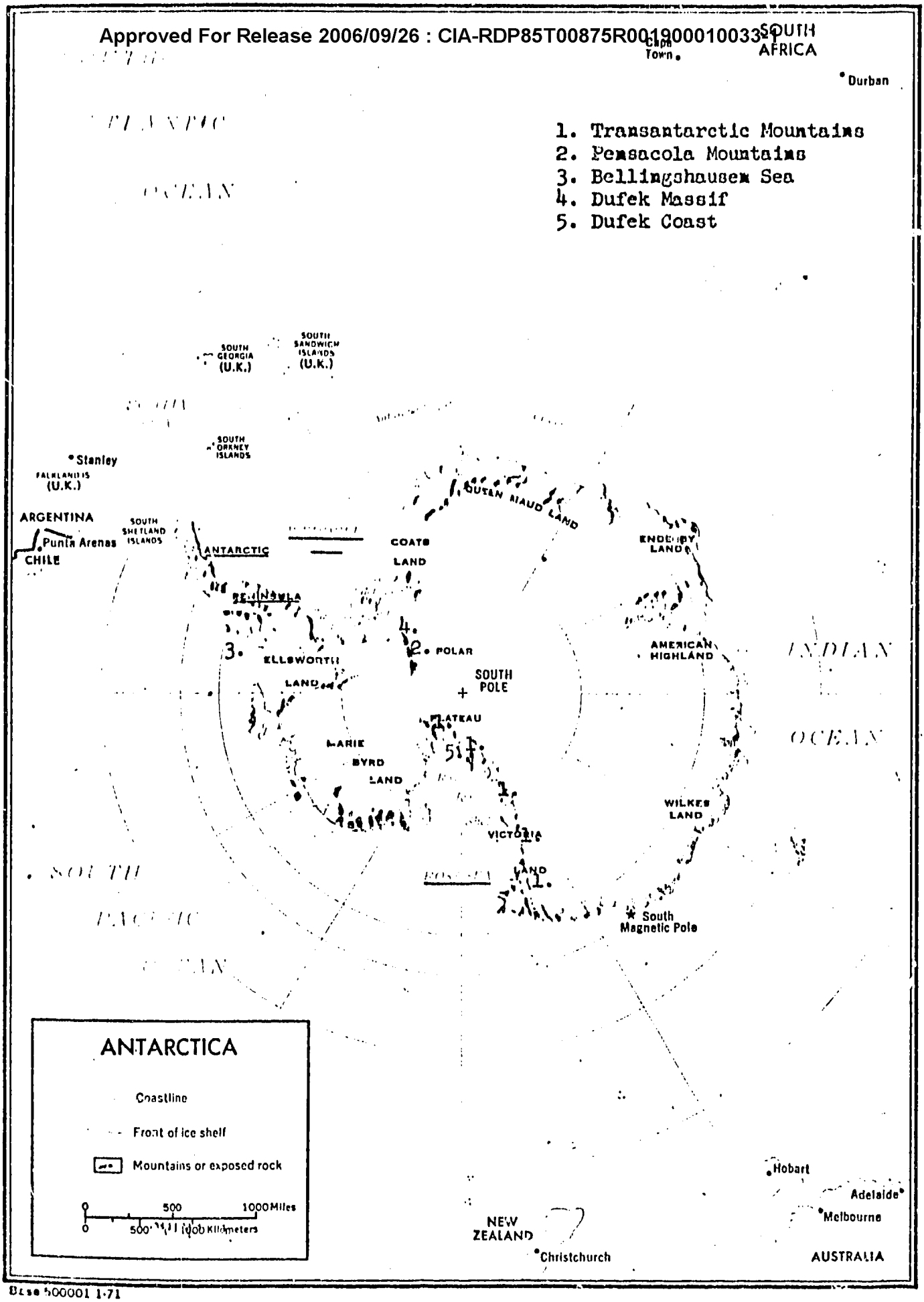
petroleum and gas potential is greatest offshore in the Weddell, Ross, and Bellinghausen Seas. By extrapolation for expected favorable rock volumes and analogy with similar rocks elsewhere, it is estimated that the Antarctic continent and surrounding waters may have 45 billion barrels of petroleum and more than 100 trillion cubic feet of gas. Although exploitation of these fuel deposits is technically feasible, the high costs of such development makes it uneconomic.

Extensive exploration of the Antarctic continues, but no exploitation of minerals or fuels has taken place. Nor is any exploitation expected in the foreseeable future due to the uneconomic nature of such ventures. However, there is continuing controversy over such activities since several countries, including New Zealand, the United Kingdom, and Australia, are under varying degrees of domestic pressure to provide Antarctic exploration permits to private enterprises. Such pressure has caused a dilemma for these countries since the present Antarctic Treaty does not discuss conservation or resource exploitation. Thus, the question of territorial claims, suspended by Article 4, comes into conflict with any efforts which would lead to a claim on mineral development rights. Consequently, any commercial exploration would undermine present Antarctic agreements and open the area to irrepairable ecological damage.

Geological research has been an integral part of Soviet Antartic Expeditions for many years and the 1971-75 Soviet five year plan calls for geological, gravimetric, and magnetic surveys of the entire continental area in order to determine mineral resource potentials. The Soviets reportedly have discovered a large bed of high quality iron ore but generally concede that practical exploitation is at least 15 to 20 years off. Despite these intensive exploration efforts, the Soviets remain adamant in denying the validity of national territorial claims and would object to any unilateral attempts at resource exploitation.

CIA/OER
30 November 1973

1. Transantarctic Mountains
2. Pensacola Mountains
3. Bellingshausen Sea
4. Dufek Massif
5. Dufek Coast



Base 500001 1-71